REMARKS

As a preliminary matter, Applicant thanks the Examiner for the courtesies extended to Applicant's representatives during the interview on April 27, 2009. During the interview, the rejections contained in the Final Office Action mailed on December 8, 2008 were discussed. The substance of the interview is incorporated in this response.

In the Final Office Action[1], the Examiner rejected claims 1, 3, 11, 14, 23, 25, 33, 36, 60, 61, 62, and 65 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,834,036 to Shiono et al. ("*Shiono*") in view of U.S. Patent No. 6,449,095 to Ohtaki et al. ("*Ohtaki*"); rejected claims 66, 67, and 70 under 35 U.S.C. § 103(a) as being unpatentable over *Shiono*, in view of *Ohtaki*, and further in view of U.S. Patent No. 6,252,686 to Ando ("*Ando*"); rejected claim 71 under 35 U.S.C. § 103(a) as being unpatentable over *Shiono*, in view of *Ohtaki*, and further in view of Applicant's admitted prior art; and objected to claims 4, 5, 17, 26, 27, and 54 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1, 3, 11, 14, 23, 25, 33, 36, 60, 61, 62, and 65 under 35 U.S.C. § 103(a) as being unpatentable over *Shiono* in view of *Ohtaki* because a *prima facie* case of obviousness has not been established with respect to these claims. A *prima facie* case of obviousness has not been established because, among other things, neither *Shiono* nor *Ohtaki*, taken alone or in combination, teach or suggest each and every element recited by Applicant's claims.

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[1] The Final Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Final Office Action.

Claim 1 recites an optical element comprising, for example:

> a first diffractive structure on at least one surface thereof,
>
> wherein when recording and/or reproducing is conducted for the first, second and third information recording mediums respectively, a light flux emitted from each of the first, second and third light sources passes in common through the first diffractive structure and thereafter is converged respectively to form a light spot on an information recording plane of the first, second and third optical information recording mediums,
>
> wherein, when a wavelength changes to become longer, the first diffractive structure has an optical characteristic to make the spherical aberration of a light flux having passed through the diffractive surface to be under, and
>
> . . .

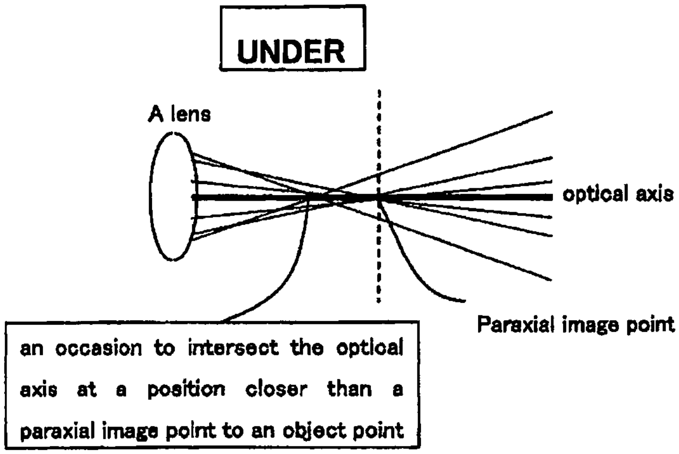
(emphasis added). *Shiono* does not disclose each and every element of Applicant's claimed invention.

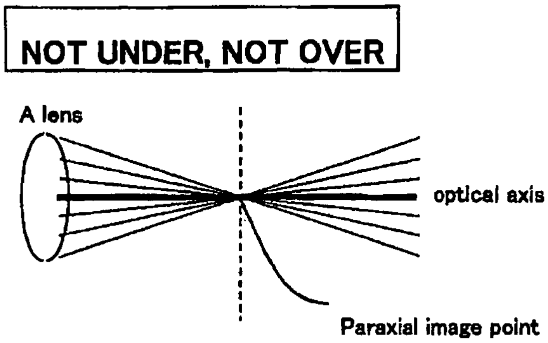
Shiono discloses providing "an optical head with high light utilization efficiency that includes a diffractive optical element and a light source emitting beams with a plurality of wavelengths for reading plural types of information recording media" (col. 2, lines 4-8). The Examiner states, "Shiono does not use the term 'under,' but discloses that when the wavelength becomes longer, the diffractive structure shortens the focal length of the lens, which is the same thing" (Final Office Action at pages 3-4). This is not correct.

The Examiner states "applicant's own specification (see page 61) defines 'making spherical aberration to be under' as 'an occasion to intersect the optical axis at a position closer than a paraxial image point to an object point in spherical aberration where a position of the paraxial image point is the origin' (Final Office Action at pages

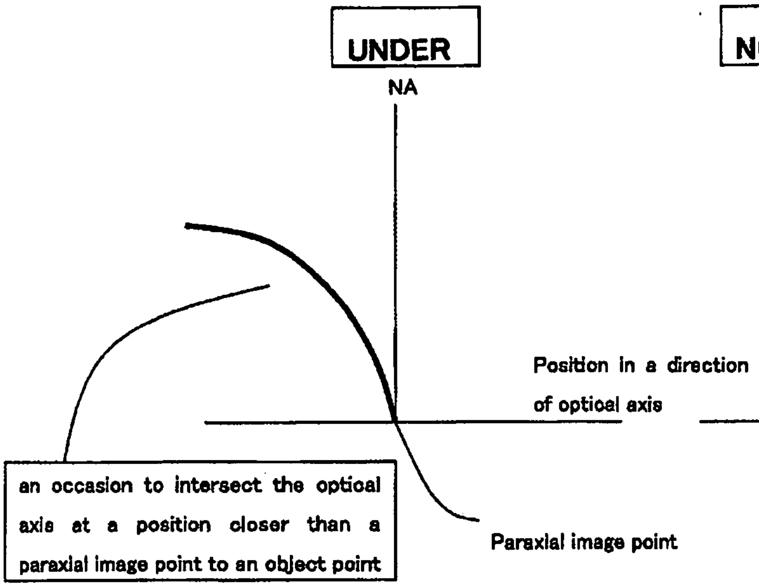
11-12). The Examiner also states "[i]n other words, the specification defines making spherical aberration 'under' as shifting the focus closer to the object point: i.e., shortening the focal length" (Final Office Action at page 12). Applicant respectfully disagrees.

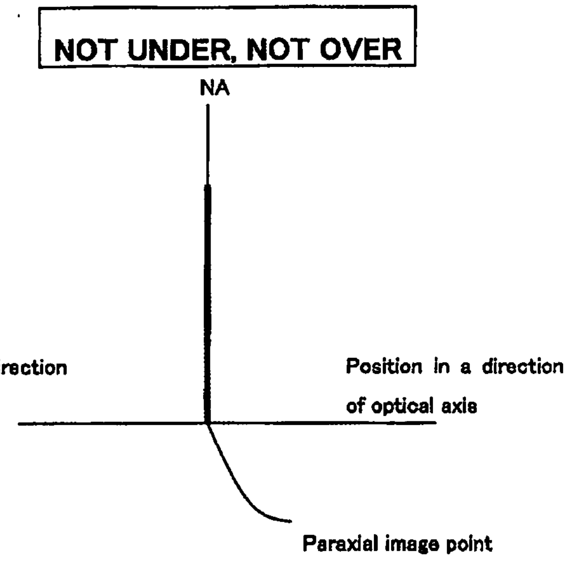
In an effort to further explain the claimed "under," Applicant has prepared the following illustration that depicts the definition of "under."


UNDER
A lens
optical axis
Paraxial image point
an occasion to intersect the optical axis at a position closer than a paraxial image point to an object point

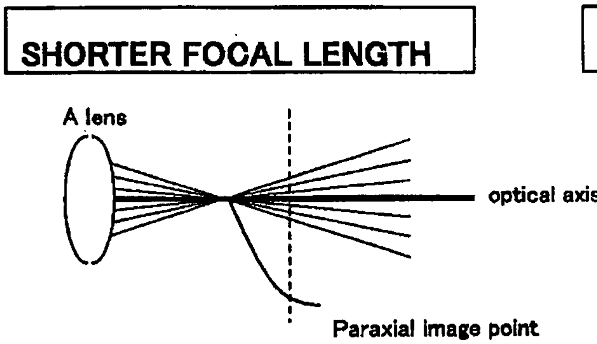


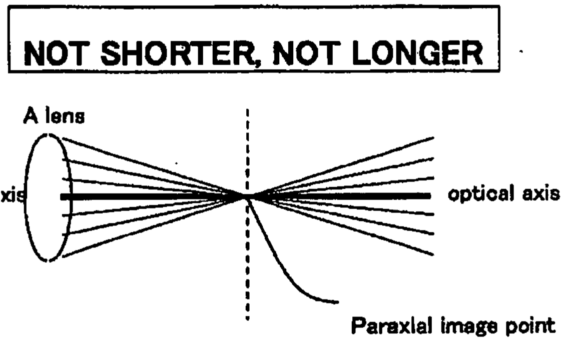
As shown in the above illustration, the focal point which is a paraxial image point does not move closer to the object point in the "under" situation. Such "under" situation and "not under and not over" situation can be shown by a spherical aberration figures as follows.


UNDER
NA
Position in a direction of optical axis
an occasion to intersect the optical axis at a position closer than a paraxial image point to an object point
Paraxial image point



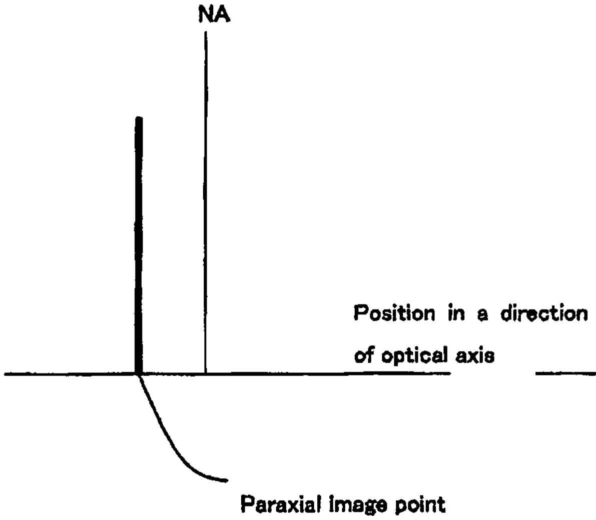
On the other hand, the shorter focal length indicated in *Shiono* is depicted in the following figures. In addition to the figure of the "shorter focal length" situation, the situation in which the focal length is not shorter or longer is also shown in the following figure for comparison.



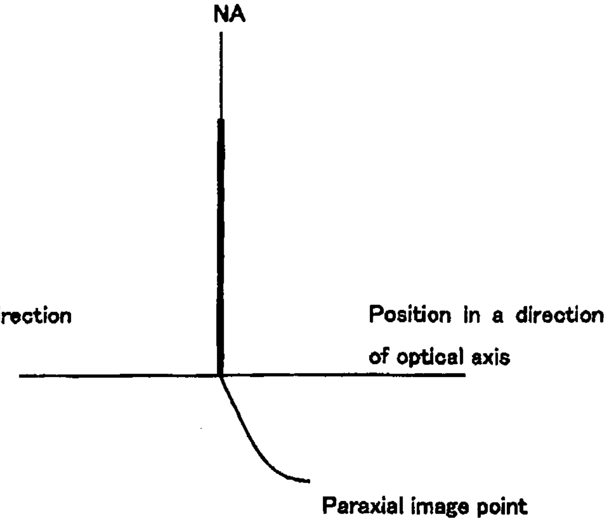


Such "shorter focal length" situation and "not shorter and not longer focal length" situation can be shown by spherical aberration figures as illustrated.

SHORTER FOCAL LENGTH



NOT SHORTER, NOT LONGER



As shown in the above figures, the focal point, which is a paraxial image point, moves closer to the object point in the "shorter focal length" situation.

Further, as illustrated above, in the situation of shorter focal length, the position of the paraxial image point is not the origin and light flux intersects the optical axis at the paraxial image point. Therefore, the definition of "under" as stated in the specification as "an occasion to intersect the optical axis at a position closer than a paraxial image point to an object point in spherical aberration where a position of the paraxial image point is the origin" cannot be applied to the situation of "the shorter focal length" disclosed in *Shiono*.

Accordingly, the claimed "under" is not same as a shorter focal length. Therefore, *Shiono* does not teach or suggest the claimed combination of elements including, for example, "wherein, when a wavelength changes to become longer, the first diffractive structure has an optical characteristic to make the spherical aberration of a light flux having passed through the diffractive surface to be under," as recited in claim 1.

Ohtaki does not cure the deficiencies of *Shiono*. *Ohtaki* discloses providing "an optical pickup that is suitable for a decrease in size and can read and write information on optical discs or recording surfaces available for different wavelengths" (col. 2, lines 8-10). However, *Ohtaki* does not teach or suggest the claimed combination of elements including, for example, "wherein, when a wavelength changes to become longer, the first diffractive structure has an optical characteristic to make the spherical aberration of a light flux having passed through the diffractive surface to be under," as recited in claim 1.

Accordingly, *Shiono* and *Ohtaki* fail to establish a *prima facie* case of obviousness with respect to claim 1, at least because the references fail to teach each and every element of the claim. Claim 1 is thus allowable. Claims 3-5, 11, and 14 depend from claim 1 and are thus also allowable for at least the same reasons as claim 1. Independent claim 23, although of difference scope than claim 1, is allowable over *Shiono* and *Ohtaki* for at least the same reasons discussed above in regard to claim 1. Claims 25-27, 33, 36, 60, 61, 62, 65-67, and 70 are also allowable at least due to their depending from claim 23.

Regarding the rejection of claims 66, 67, and 70, dependent from claim 23, the Examiner relies on *Ando* for allegedly disclosing "a first beam shaper to shape a light flux having the wavelength λl is located at a light source side than the collimator on an optical path on which the light flux having the wavelength λ1 passes" (Final Office Action at page 8). Even assuming this allegation is correct, which Applicant does not concede, *Ando* fails to cure the deficiencies of *Shiono* and *Ohtaki* discussed above. That is, *Ando* does not teach or suggest the claimed combination of elements including, for example, "wherein, when a wavelength changes to become longer, the first diffractive structure has an optical characteristic to make the spherical aberration of a light flux having passed through the diffractive surface to be under," as recited in claim 23, and required by dependent claims 65, 66, and 70.

Therefore, no *prima facie* case of obviousness has been established, and claims 65, 66, and 70 are also allowable over *Shiono*, *Ohtaki*, and *Ando* for at least the same reasons as claim 23.

Regarding the rejection of claim 71, dependent from claim 23, the Examiner relies on Applicant's admitted prior art for allegedly disclosing "wherein the collimator is made of a plastic material" (Final Office Action at page 9). Even assuming this allegation is correct, which Applicant does not concede, Applicant's admitted prior art fails to cure the deficiencies of *Shiono* and *Ohtaki* discussed above. That is, Applicant's admitted prior art does not teach or suggest the claimed combination of elements including, for example, "wherein, when a wavelength changes to become longer, the first diffractive structure has an optical characteristic to make the spherical aberration of a light flux having passed through the diffractive surface to be under," as recited in claim 23, and required by dependent claim 71.

Therefore, no *prima facie* case of obviousness has been established, and claim 71 is also allowable over *Shiono*, *Ohtaki*, and Applicant's admitted prior art for at least the same reasons as claim 23.

The Examiner also stated, "Applicant did not traverse the taking of Official Notice and therefore this fact has been taken as admitted prior art" (Final Office Action at page 9). Applicant respectfully traverses this statement and submits that Applicant has not admitted the Examiner's statement and reserves the right to traverse this rejection in a subsequent Office Action.

In view of the foregoing, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: May 4, 2009

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